

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/890,836C  
Source: IFW/C  
Date Processed by STIC: 8/29/05

# ***ENTERED***

# CRF Errors Edited by the STIC Systems Branch

Serial Number: 09/890, 836C

CRF Edit Date: 8/29/05  
Edited by: KE

\_\_\_ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

\_\_\_ Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

✓ \_\_\_ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

4-7

\_\_\_ Deleted: \_\_\_ invalid beginning/end-of-file text ; \_\_\_ page numbers

\_\_\_ Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

\_\_\_ Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

\_\_\_ Other:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



IFW16

## RAW SEQUENCE LISTING

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:41

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

```

4 <110> APPLICANT: Andrew Bett
5     Volker Sandig
6     Rima Youil
8 <120> TITLE OF INVENTION: IMPROVED HELPER DEPENDENT VECTOR SYSTEM
9     FOR GENE THERAPY
11 <130> FILE REFERENCE: 20377YP
13 <140> CURRENT APPLICATION NUMBER: US 09/890,836C
14 <141> CURRENT FILING DATE: 2001-08-03
16 <150> PRIOR APPLICATION NUMBER: PCT/US00/02405
17 <151> PRIOR FILING DATE: 2000-01-31
19 <150> PRIOR APPLICATION NUMBER: 60/138,134
20 <151> PRIOR FILING DATE: 1999-06-08
22 <150> PRIOR APPLICATION NUMBER: 60/118,601
23 <151> PRIOR FILING DATE: 1999-02-04
25 <160> NUMBER OF SEQ ID NOS: 17
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 15
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35 <223> OTHER INFORMATION: Consensus sequence
W--> 37 <221> NAME/KEY: misc_feature
38 <222> LOCATION: (1)...(15)
39 <223> OTHER INFORMATION: n = A,T,C or G
W--> 41 <400> 1
W--> 42 atttgnnnnn nnncg                                     15
44 <210> SEQ ID NO: 2
45 <211> LENGTH: 10
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial Sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Adenovirus 5
52 <400> SEQUENCE: 2
53 attttgtgtt                                             10
55 <210> SEQ ID NO: 3
56 <211> LENGTH: 10
57 <212> TYPE: DNA
58 <213> ORGANISM: Artificial Sequence
60 <220> FEATURE:
61 <223> OTHER INFORMATION: Consensus sequence
63 <400> SEQUENCE: 3
64 attttgttgt                                             10

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## RAW SEQUENCE LISTING

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:41

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

```

66 <210> SEQ ID NO: 4
67 <211> LENGTH: 158
68 <212> TYPE: DNA
69 <213> ORGANISM: Artificial Sequence
71 <220> FEATURE:
72 <223> OTHER INFORMATION: Synthetic packaging signal
74 <400> SEQUENCE: 4
75 gtacacagga agtgactttt aacgcgcggt ttgttacgga tgtttagta aatttgtcta      60
76 gggccgagta agatttgacc gtttacgcgg ggactttgaa taagagcgag tgaaatctga      120
77 ataattttgt tgtactcata gcgcgtaatc tctagacg      158
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 158
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Adenovirus 5
87 <400> SEQUENCE: 5
88 gtacacagga agtgacaatt ttcgcgcggt tttaggcgga tgtttagta aatttgggcg      60
89 taaccgagta agatttggcc attttcgcgg gaaaactgaa taagaggaag tgaaatctga      120
90 ataattttgt gttactcata gcgcgtaatc tctagacg      158
92 <210> SEQ ID NO: 6
93 <211> LENGTH: 65
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Linker
100 <400> SEQUENCE: 6
101 agctcggccg attattggcg cgccagatct gcggccgctt ctagaaacgc gtgaattcgg      60
102 cgcca      65
105 <210> SEQ ID NO: 7
106 <211> LENGTH: 65
107 <212> TYPE: DNA
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: Linker
113 <400> SEQUENCE: 7
114 agcttggcgc cgaattcacg cgtttctaga agcggccgca gatctggcgc gccataatc      60
115 ggccg      65
118 <210> SEQ ID NO: 8
119 <211> LENGTH: 40
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: PCR Primer
126 <400> SEQUENCE: 8
127 attggcgcgc cttctttctg ggatgattca gcatcaactc      40
129 <210> SEQ ID NO: 9
130 <211> LENGTH: 41
131 <212> TYPE: DNA

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## RAW SEQUENCE LISTING

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:41

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

```

132 <213> ORGANISM: Artificial Sequence
134 <220> FEATURE:
135 <223> OTHER INFORMATION: PCR Primer
137 <400> SEQUENCE: 9
138 gatcgtcggc cgcttgggtc atagacttct ttgagaacca g      41
140 <210> SEQ ID NO: 10
141 <211> LENGTH: 41
142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
146 <223> OTHER INFORMATION: PCR Primer
148 <400> SEQUENCE: 10
149 atcagtttagc ggccgcacaa gctaagatca caaagctggt t      41
151 <210> SEQ ID NO: 11
152 <211> LENGTH: 37
153 <212> TYPE: DNA
154 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: PCR Primer
159 <400> SEQUENCE: 11
160 tatggcgcg cgcgtgacacc cagcctgggt gccggtg      37
162 <210> SEQ ID NO: 12
163 <211> LENGTH: 39
164 <212> TYPE: DNA
165 <213> ORGANISM: Artificial Sequence
167 <220> FEATURE:
168 <223> OTHER INFORMATION: PCR Primer
170 <400> SEQUENCE: 12
171 tcgacgcgta ggcgtgtgtg gccttggcag tttccatag      39
173 <210> SEQ ID NO: 13
174 <211> LENGTH: 45
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: PCR Primer
181 <400> SEQUENCE: 13
182 tcagtaatgc ggccgcggga tcattcctgg actcagattg ttctg      45
184 <210> SEQ ID NO: 14
185 <211> LENGTH: 41
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial Sequence
189 <220> FEATURE:
190 <223> OTHER INFORMATION: PCR Primer
192 <400> SEQUENCE: 14
193 tattaaggcg ccgggcatgg gagtgatctc accaactctg g      41
195 <210> SEQ ID NO: 15
196 <211> LENGTH: 46
197 <212> TYPE: DNA
198 <213> ORGANISM: Artificial Sequence

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## RAW SEQUENCE LISTING

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:41

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

```

200 <220> FEATURE:
201 <223> OTHER INFORMATION: PCR Primer
203 <400> SEQUENCE: 15
204 tcgacgcgta tttaaatgtg ctggagtgtt gagatactgt agtgggt 46
206 <210> SEQ ID NO: 16
207 <211> LENGTH: 28068
208 <212> TYPE: DNA
209 <213> ORGANISM: Artificial Sequence
211 <220> FEATURE:
212 <223> OTHER INFORMATION: Modified adenovirus
214 <400> SEQUENCE: 16
215 aaacatcatc aataatatac cttatttttg attgaagcca atatgataat gaggggggtgg 60
216 agttttgtgac gtggcgcggg gcgtgggaac ggggcgggtg acgtagtagt gtggcggaag 120
217 tgtgatgttg caagtgtggc ggaacacatg taagcgacgg atgtggcaaa agtgacgttt 180
218 ttggtgtgcg ccggtgtaca caggaagtga caattttcgc gcggttttag gcggatgttg 240
219 tagtaaat tttggcgtaacc gagtaagatt tggccatttt cgcgggaaaa ctgaataaga 300
220 ggaagtga tctgaataat tttgtgttac tcatagcgcg taatatttct ctagggccgc 360
221 ggggactttg accgtttacg tggagactcg ccaggtgtt tttctcaggt gttttccgcg 420
222 ttccgggtca agtttggcgt tttgattcgg ccgcttgggt catagacttc tttgagaacc 480
223 agttataagc tatggtttct ctccacagaa aaagcactta tgggtgtctcc ccctttccag 540
224 cccaccaaca ttttacatct aatttggggg ggttttcttg accacttaat acccatccat 600
225 ggatctcatg tgaagactcc cctggcttga gaaatcactg tcttgttgaa aatgggaaca 660
226 aagctaagtc agatagctgg ttcacagca atgactttga ccaagcctga tcccacccta 720
227 ccccccacca cccagtgac cccccccac aatggagcac acaactctaa actggtttgt 780
228 aggtatgtgt gtgtgaacac gctgaggaat ctgcaaaacc aaatggtgag tgcaaaacca 840
229 aacagtcacg agtaaatctc acaacaacca cgtcctgagc tgcagccctt gttgaactat 900
230 cccccactag ggccccaga ttttaggact tgtgtgtggg tgggacctcc cttttctatc 960
231 atgctttaga agacagggat ttcaccagaa ttgaacatat tgaacatatg acccattttt 1020
232 ttcagccaaa ggcaattaaa ataacttcat acttgatata catgtcagca aaagctgcaa 1080
233 aacgcaaatg ggtggctgct aagagccctg gtaccctgac gagcacacca agtgcttagc 1140
234 aacagtgggtg tccaaaggac cagctggaag cctgccttga tgagaagttg ctcttctttc 1200
235 tacatgaagg aacacctcta ctctcctgct ttaataacct gagctgtgag tgatcatcta 1260
236 tgtccattag caaacatccc agtgaggaga gaaacactca taccgaaat ctaagctaca 1320
237 tagttggaat cacttcaact tattgcaata aacacttact aagcacctat tgtgggcaag 1380
238 tctttgcaat ggataatagt tcagtagata ttttgatgta atatttgaaa taacaataaa 1440
239 aattgccacc actgaattta ttgagcattt gctgtgcttt aggcactaac ccaggttctt 1500
240 taaatatttg gtcttattcg atctgtataa atagccatct atgagaaagg gactattatt 1560
241 gcccttattt tacaaatgag gccaatgagg cccagagagg ttaactaagt tgcccaaat 1620
242 catacagccc actagtggca gagcaggatg caaaccagg cttgcctcgt tcccagccc 1680
243 acatgtcggt tgcattgggt tggagggtgt catgtgttta gtcattagca tgttatatga 1740
244 taagcaagtt ttgaaacata gaaacttaaa atgtgccatt aagaaaagta caggcaagg 1800
245 tttccaaggg gaggtgtgga cctccggaca aatttttaag aactaattat aaatacttaa 1860
246 aatgggaat agaagacaa cctaactacc tgaacagttt tagagatgac tcatgccac 1920
247 cctctaaaac ccaacaaaa acaacaaagt caagaaaacc catgaaatct tagcaagcga 1980
248 tttctatgta cttgtgaaaa ggatttcttt accattctaa tgggatttat gccaccata 2040
249 gagggctcag tgcccctccc atgggggtgt tagtgagtac agagctgagc tcaccggcca 2100
250 tctgcagctt catgttatca agctccagtt tgtccttgga gcaaggttat ctgggacatg 2160
251 agcagaggca ttgctttctg caatggacag ttctttctgc ctgcatacct agctccttga 2220
252 taactttaaa taccatttta tagccacact ggagttttga agacctcaat atgcaaatat 2280

```

## RAW SEQUENCE LISTING

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:41

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

253	tactcaggtt	ctgattactt	gtctgctcca	tgataacaca	ctctaaaagc	aatgaatggg	2340
254	gcttatttgt	agagaactga	agcattttta	gcttttgctc	aggaatccct	ggtagcttcc	2400
255	tgtgacttgc	aagatattag	tgatgggtca	agaaacagga	cccccatca	gcataacata	2460
256	cgcagtgcct	cagtagtcca	tcaggcagaa	aaaactgcag	atggcacatg	gaaatgacca	2520
257	gcggcggaag	ataccccgac	agtgtgggca	gttctatttc	agcagcaatc	aagagggggc	2580
258	ctggagccac	tcaatcaagt	ggagcaggat	gggagcaagc	actgtgcaga	ccaatgcaat	2640
259	cccagtttaa	cacaaaaaat	aaataaaaga	gatgagattc	agtctcttga	ctgtgactga	2700
260	ctgggagctt	tatagctgat	gcttgtgtct	tttctccatt	ttatttaatt	aggaaaagaa	2760
261	atgcttatca	cacactctac	gtgtgaggta	caacctccac	aggaaagggt	gtaggaaca	2820
262	tttcaacttc	tagaagtttc	taaacataag	gtaaatccat	ctttgtcctt	gggatcactg	2880
263	cacatctcag	aaaggcaaat	aatcagtaa	ttggtgggca	taattactag	ctcatggact	2940
264	gacaaggctc	acactatttc	gaatctcaca	gaagtaagcc	atgggacaga	tagagtctga	3000
265	tagtggtgcc	ccgtttcctg	gaggtcacac	ttactcatcc	ccctggaccc	tgggcttctc	3060
266	atgattgtca	gagagtttgc	tggaaaccagg	tcagcccagt	ttcccttccc	ctgaaaaatc	3120
267	ctccaatggc	tcgcaccaag	actagagatg	caagtgcag	cacatccacc	ctctcagcag	3180
268	ccaggttttg	cgttccataa	tgtcacgtac	ccccagtcac	accaatctcc	ttggagctct	3240
269	ccagacaggc	tgccatgtgt	ggtcggccct	ctgtgcttgt	gtccttgggt	ttgccaaagc	3300
270	tggaatgccc	tttctccatg	attgtactct	gggaattctg	tgtgtctttc	gagatgaagc	3360
271	tcctccaccc	tggaaattct	gcctctcttt	ccaggtccag	ctcctgtggc	tgaataccct	3420
272	tggctgactg	aacattcttg	ctgggccaag	tcttaatcat	ctctaaatcc	ctctgggtgc	3480
273	cgcacagtat	ctagcccagg	caaagggctc	agcaaatact	tgcaaaatcc	aataaacttt	3540
274	actatgttac	tagcttggca	tgatgttcta	ggcacttggg	agattataat	ctggtgagca	3600
275	ttgtgctagt	cttttttttg	ggataaacac	caatgataaa	ctgagccttt	actctcattt	3660
276	tagcacatct	actcatctct	tttcaatgct	ggtgggttta	taaaacccat	cagtagaaca	3720
277	gagagtgate	ataatcatat	ggtgaaaata	acatcagcta	acatatttac	tgaacatgct	3780
278	ttagtgtgct	gggcactgaa	ctctgtgcac	atgtgaattt	gagatagatt	gttcctagct	3840
279	aataagatga	ggaagtggag	atgggcttac	tcaagtcaca	caatagcaag	atggggtaca	3900
280	gacagaaacc	aagctagaaa	ccaagcaacc	cctgggtttg	gaaatgcatg	ggctcctcct	3960
281	ctgcacatgg	cgaggagcag	tcaggtgctc	ctccttctct	catactgaaa	taactctgca	4020
282	cttttggtca	ttctgtgaca	ctctgtgcta	ttctgtagct	caaattggctc	tgggtgcaagg	4080
283	agctcagatt	atgactaacc	cccatagata	ttcagctgct	ttgcaagaag	tggatgaatg	4140
284	ctctggcttt	ataaattatt	gactagattg	gatattggcc	caatctccac	tctggtgatt	4200
285	cggaaggagg	catatgcaca	tttgcaagg	tatagtagtg	cactctaatt	ccactggctt	4260
286	ctgagagctt	gtaggtttct	tgacttaatc	attctggaat	taaggtaatg	gacctcaac	4320
287	accttttctt	tccttgccct	ttactaacca	tgtaacagaa	atgagcagag	aaaacccaag	4380
288	aaagcgaact	ggagacttga	tgagtgtgtc	aaagatgctc	agagtccaag	gtcctctgtg	4440
289	gctcactgac	ttcagaagcc	aacctccgtt	gttcaagtca	cttgtgaggt	tactatgcta	4500
290	gagcactaaa	tattatccag	atagcccaaa	gaggtgaagg	cagacatgtg	gaagaacctg	4560
291	gatttttggg	caagttgatg	aatgcctcct	gccccatata	aaagagaggt	gataggagac	4620
292	aacttttgtga	atttgaaata	atgcaccggg	gaaacaggaa	aacgtaatgt	aagtcacgct	4680
293	tcttggtttt	tttcttgcca	ttacctact	tggccaagtg	caaattgggt	ttcaatatat	4740
294	cataagtatg	catctattaa	taacaatgca	agaaagctgt	acaactgaag	tctgagattt	4800
295	tgtagaagaa	agaatctctg	taagcatcac	catccaacag	aacttctctg	gttgatgctg	4860
296	aatcatccca	gaaagaaggc	gcgccagctc	tgcaggatct	tcaagtctgg	gggtgccacca	4920
297	gcaagcgacg	gtcctccatg	ggctcttcac	cttacggcag	tgtccagagg	caccgccagt	4980
298	cctctgctcc	tatgtgtgtc	ctgtgtccc	tggcaaaagg	agccagagca	ttctctccag	5040
299	gcctcccag	gaggtgctt	cctttgtttt	gcagatggag	gtcctccatcc	tttgttctga	5100
300	atcaatgtgc	tccaaagata	agccccaaga	aaacagttgt	tgccttttga	cactgacaat	5160
301	tagaatcggt	ggaaaatgga	gaaaacagga	aatggcaaat	ggtttcagtg	accaggagga	5220

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 08/29/2005  
PATENT APPLICATION: US/09/890,836C      TIME: 11:40:42

Input Set : A:\pto.kd.TXT  
Output Set: N:\CRF4\08292005\I890836C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 6,7,8,9,10,11,12,13

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:6; Line(s) 102

Seq#:7; Line(s) 115



**VERIFICATION SUMMARY**

DATE: 08/29/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:40:42

Input Set : A:\pto.kd.TXT

Output Set: N:\CRF4\08292005\I890836C.raw

L:37 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:41 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0

Raw Sequence Listing before editing,  
for reference only



IFW16

## RAW SEQUENCE LISTING

DATE: 08/20/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:46:20

Input Set : A:\pto.da.TXT

Output Set: N:\CRF4\08202005\I890836C.raw

4 <110> APPLICANT: Andrew Bett  
 5 Volker Sandig  
 6 Rima Youil  
 8 <120> TITLE OF INVENTION: IMPROVED HELPER DEPENDENT VECTOR SYSTEM  
 9 FOR GENE THERAPY  
 11 <130> FILE REFERENCE: 20377YP  
 13 <140> CURRENT APPLICATION NUMBER: US 09/890,836C  
 14 <141> CURRENT FILING DATE: 2001-08-03  
 16 <150> PRIOR APPLICATION NUMBER: PCT/US00/02405  
 17 <151> PRIOR FILING DATE: 2000-01-31  
 19 <150> PRIOR APPLICATION NUMBER: 60/138,134  
 20 <151> PRIOR FILING DATE: 1999-06-08  
 22 <150> PRIOR APPLICATION NUMBER: 60/118,601  
 23 <151> PRIOR FILING DATE: 1999-02-04  
 25 <160> NUMBER OF SEQ ID NOS: 17  
 27 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Does Not Comply  
 Corrected Diskette Needed  
 (PS. 1-2)

## ERRORED SEQUENCES

66 <210> SEQ ID NO: 4  
 67 <211> LENGTH: 158  
 68 <212> TYPE: DNA  
 69 <213> ORGANISM: Artificial Sequence  
 71 <220> FEATURE:  
 72 <223> OTHER INFORMATION: Synthetic packaging signal  
 74 <400> SEQUENCE: 4  
 E--> 75 ~~gtacacagga agtgaatttt aacgcgcggt ttgttacgga tgtttagta aatttgtcta~~  
 W--> 76 60gggccgagta agatttgacc gtttacgcgg ggactttgaa taagagcgag tgaaatctga  
 E--> 77 120ataattttgt tgtactcata gcgcgtaatc tctagacg  
 79 <210> SEQ ID NO: 5  
 80 <211> LENGTH: 158  
 81 <212> TYPE: DNA  
 82 <213> ORGANISM: Artificial Sequence  
 84 <220> FEATURE:  
 85 <223> OTHER INFORMATION: Adenovirus 5  
 87 <400> SEQUENCE: 5  
 E--> 88 gtacacagga agtgacaatt ttcgcgcggt tttaggcgga tgtttagta aatttgggag  
 W--> 89 60taaccgagta agatttggcc attttcgcgg gaaaactgaa taagaggaag tgaaatctga  
 E--> 90 120ataattttgt gttactcata gcgcgtaatc tctagacg  
 92 <210> SEQ ID NO: 6  
 93 <211> LENGTH: 65  
 94 <212> TYPE: DNA

158

158

## RAW SEQUENCE LISTING

DATE: 08/20/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:46:20

Input Set : A:\pto.da.TXT

Output Set: N:\CRF4\08202005\I890836C.raw

95 <213> ORGANISM: Artificial Sequence  
97 <220> FEATURE:  
98 <223> OTHER INFORMATION: Linker  
100 <400> SEQUENCE: 6  
W--> 101 agctcggccg attattggcg cgccagatct gcggccgctt ctagaaacgc gtgaattcgg  
E--> 102 65  
104 <210> SEQ ID NO: 7  
105 <211> LENGTH: 65  
106 <212> TYPE: DNA  
107 <213> ORGANISM: Artificial Sequence  
109 <220> FEATURE:  
110 <223> OTHER INFORMATION: Linker  
112 <400> SEQUENCE: 7  
W--> 113 agcttggcgc cgaattcacg cgtttctaga agcggccgca gatctggcgc gccataatc  
E--> 114 65

60cgcca

60ggccg

Moved text  
to  
next  
line

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/890,836C

DATE: 08/20/2005  
TIME: 11:46:21

Input Set : A:\pto.da.TXT  
Output Set: N:\CRF4\08202005\I890836C.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:6; Line(s) 101

Seq#:7; Line(s) 113

## VERIFICATION SUMMARY

DATE: 08/20/2005

PATENT APPLICATION: US/09/890,836C

TIME: 11:46:21

Input Set : A:\pto.da.TXT

Output Set: N:\CRF4\08202005\I890836C.raw

L:37 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:41 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
L:75 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:4  
L:76 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
L:77 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
M:254 Repeated in SeqNo=4  
L:77 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:3  
L:77 M:252 E: No. of Seq. differs, <211> LENGTH:Input:158 Found:98 SEQ:4  
L:88 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:5  
L:89 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
L:90 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5  
M:254 Repeated in SeqNo=5  
L:90 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:3  
L:90 M:252 E: No. of Seq. differs, <211> LENGTH:Input:158 Found:98 SEQ:5  
L:101 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:7  
L:102 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:102 M:301 E: (44) No Sequence Data was Shown, SEQ ID:6  
L:102 M:252 E: No. of Seq. differs, <211> LENGTH:Input:65 Found:0 SEQ:6  
L:113 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:7  
L:114 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7  
L:114 M:301 E: (44) No Sequence Data was Shown, SEQ ID:7  
L:114 M:252 E: No. of Seq. differs, <211> LENGTH:Input:65 Found:0 SEQ:7